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Claims

1. Device (10) for receiving signals in a wireless orthogonal frequency division multiplex (OFDM) system, in which data symbols and pilot symbols are transmitted in frequency subcarriers and timeslots, comprising
- 10 receiving means (11) for receiving pilot symbols transmitted in a continuous stream within at least one frequency subcarrier and
- channel estimation means (16) for performing a channel estimation for a data symbol on the basis of received pilot symbols using a filter including a common phase error correction value from the continuous stream pilot symbol in the same timeslot as the
- 15 data symbol to be channel estimated.
2. Device (10) according to claim 1,  
**characterized in,**
- that said receiving means (11) is further adapted to receive distributed pilot symbols
- 20 distributed among said frequency subcarriers and timeslots, whereby said channel estimation means performs said channel estimation on the basis of at least two of said distributed pilot symbols.
3. Device (10) according to claim 2,  
**characterized in,**
- 25 that said channel estimation means (16) performs said channel estimation on the basis of at least two of said distributed pilot symbols in different timeslots using a time filter.
4. Device (10) according to claim 3,  
**characterized in,**
- 30 that said channel estimation means (16) calculates said common phase error correction value on the basis of the continuous stream pilot symbol in the same timeslot as the data symbol to be channel estimated and on the basis of the continuous stream pilot symbols respectively in the same timeslot as said at least two distributed pilot symbols.
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5. Device (10) according to claim 4,  
**characterized in,**
- that said common phase error correction value is calculated on the basis of common phase error ratios between said continuous stream pilot symbol in the same timeslot as

the data symbol to be channel estimated and each of said continuous stream pilot symbols respectively in the same timeslot as said at least two distributed pilot symbols.

6. Channel estimation method in a wireless orthogonal frequency division multiplex (OFDM) system, in which data symbols and pilot symbols are transmitted in frequency subcarriers and timeslots and in which pilot symbols are transmitted in a continuous stream within at least one frequency subcarrier, whereby a channel estimation for a data symbol is performed on the basis of received pilot symbols using a filter including a common phase error correction value from the continuous stream pilot symbol in the same timeslot as the data symbol to be channel estimated.
7. Channel estimation method according to claim 6,  
**characterized in,**  
that distributed pilot symbols are distributed among said frequency subcarriers and timeslots, whereby said channel estimation is performed on the basis of at least two of said distributed pilot symbols.
8. Channel estimation method to claim 7,  
**characterized in,**  
that said channel estimation is performed on the basis of at least two of said distributed pilot symbols in different timeslots using a time filter.
9. Channel estimation method according to claim 8,  
**characterized in,**  
that said common phase error correction value is calculated on the basis of the continuous stream pilot symbol in the same timeslot as the data symbol to be channel estimated and on the basis of the continuous stream pilot symbols respectively in the same timeslot as said at least two distributed pilot symbols.
10. Channel estimation method according to claim 9,  
**characterized in,**  
that said common phase error correction value is calculated on the basis of common phase error ratios between said continuous stream pilot symbol in the same timeslot as the data symbol to be channel estimated and each of said continuous stream pilot symbols respectively in the same timeslot as said at least two distributed pilot symbols.